

REMARKSAmendments

In the descriptive part of the specification, information about related patent applications has been added and the status of a reference has been updated. Various minor amendments have been made to claims 8, 9, and 13 to correct minor errors and to conform them to U.S. claim practice. Claims 10 and 14 have been canceled. New claims 19 and 21, dependent on claims 8 and 13, respectively, have been added. Basis for these is found in the "preferable" clauses originally in claims 8 and 13 as filed.

Disclosure Under 37 CFR § 1.56

In fulfilling the duty of candor and good faith, the following documents are hereby disclosed to the Patent Office in accordance with 37 CFR § 1.56. It is not admitted that the information in the listed documents is material to patentability as defined in 37 CFR § 1.56(b). The Examiner is requested to consider the documents in the examination of this application.

Accompanying this statement is a Form PTO-1449 in duplicate on which the documents are listed. The Examiner is requested to return an initialed and signed copy of the form once the documents have been considered.

Each of the documents listed below (or its counterpart) was cited by Applicants during the prosecution of U.S. Application No. 09/830,547, from which the present application draws priority and which is relied on for an earlier effective filing date for this application under 35 U.S.C. § 120. In accordance with 37 CFR §1.98(d), copies of these documents are not being submitted as Applicants believe that copies have been made available to the Examiner during the prosecution of the parent application. If this is incorrect, Applicants will readily supply copies. These documents are, however, listed on the accompanying Form PTO-1449.

## U.S. PATENTS

Document number	Date	Name	Class	Sub-Class
3,668,373	06/1972	Laing	219	505
4,237,441	12/1980	van Konynenburg et al.	338	22 R
4,545,926	10/1985	Fouts et al.	252	511

4,724,417	02/1988	Au et al.	338	22 R
4,774,024	09/1988	Deep et al.	252	511
4,935,156	06/1990	van Konynenburg	219	553
5,049,850	09/1991	Evans et al.	338	22 R
5,158,366	10/1992	Nagai et al..	374	183
5,166,658	11/1992	Fang et al..	338	23
5,250,228	10/1993	Baigrie et al.	252	511
5,378,407	01/1995	Chandler et al.	252	513
5,451,919	09/1995	Chu et al.	338	22 R
5,582,770	12/1996	Chu et al.	252	511
5,663,702	09/1997	Shaw, Jr.	337	183
5,747,147	05/1998	Wartenberg et al.	428	209
5,864,281	01/1999	Zhang et al.	338	22 R
6,130,597	10/2000	Toth et al.	338	22 R

## FOREIGN DOCUMENTS

Document number	Date	Country	Class	Subclass	Comment
0 064 334	Nov. 1982	Europe	G01K	1/02	
2 220 296 A	Jan. 1990	Great Britain	H01M	6/50	
10-270094	Oct. 1998	Japan	H01M	10/48	Translation originally sent
2880200	Jan. 1999	Japan	G01R'	31/36	Translation originally sent

## OTHER DOCUMENTS

Details of Document
European Patent Office International Search Report for International Application No. PCT/US99/25351 dated February 11, 2000.
U.S. Application No. 09/288,045 (Fang et al, filed April 7, 1999; counterpart of Japanese Application No. 10-95019, listed in the specification))

The following additional documents were cited by the Examiner during the prosecution of the parent application. Copies of these documents are being sent, as they did not meet the requirements of 37 CFR § 1.97(d)(2) of being listed on an information disclosure statement.

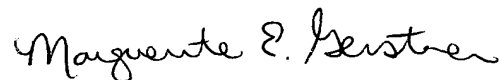
## U.S. PATENTS

Document number	Date	Name	Class	Sub-Class
2,278,072	03/1492	Gould et al.	338	22R
4,251,793	02/1981	Vind	338	22R
4,330,703	05/1982	Horsma et al.	338	22R
5,977,861	11/1999	Duggal et al.	338	22R
6,020,808	02/2000	Hogge	338	22R
6,114,942	09/2000	Kitamoto et al.	338	22R
6,124,781	09/2000	Hogge et al.	338	22R
6,172,591	01/2001	Barrett	338	22R
6,300,861	10/2001	Osada et al.	338	22R

Conclusion

It is believed that this application is now in condition for allowance and such action at an early date is earnestly requested. If, however, there are any outstanding issues which can be usefully discussed by telephone, the Examiner is asked to call the undersigned.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADEIn the Specification

*The following heading and paragraph have been added before the heading "Field of the Invention" on page 1, line 5:*

--Cross-Reference to Related Applications

This application is a continuation of copending, commonly assigned U.S. Application No. 09/830,547, filed August 1, 2001, which is a continuation-in-part of U.S. Application No. 09/182,590, filed October 28, 1998, now U.S. Patent No. 6,137,669. U.S. Application No. 09/830,547 is also the National Stage of International Application No. PCT/US99/25351. The disclosure of each of these applications is incorporated herein by reference.--

*The paragraph beginning at page 6, line 22 of the specification has been amended as follows:*

Suitable conductive polymer compositions exhibiting PTC behavior are disclosed in U.S. Patent Nos. 4,237,441 (van Konynenburg et al), 4,545,926 (Fouts et al), 4,724,417 (Au et al), 4,774,024 (Deep et al), 4,935,156 (van Konynenburg et al), 5,049,850 (Evans et al), 5,250,228 (Baigrie et al), 5,378,407 (Chandler et al), 5,451,919 (Chu et al), 5,582,770 (Chu et al), 5,701,285 (Chandler et al), and 5,747,147 (Wartenberg et al), and in copending, commonly assigned U.S. Application No. 08/798,887 (Toth et al, filed February 10, 1997), now U.S. Patent No. 6,130,597, the counterpart of which is published as International Patent Publication No. WO97/29711, published September 26, 1996. The disclosure of each of these patents and applications is incorporated herein by reference.

In the Claims

*Claims 8, 9, and 13 have been amended as follows:*

8. (Amended) A sensor according to claim 1 wherein when at least one sensing element is exposed to a temperature greater than  $T_s$ , the resistance of the sensor is at least  $1.1R_T$ , at least  $1.3R_T$ .
9. (Amended) A sensor according to claim 1 wherein the sensor is positioned directly in contact with and covers [covering] at least 75% of one surface of the substrate.

13. (Amended) A sensor according to claim 1 which comprises an array comprising at least two groups of sensing elements[, preferably wherein the groups comprise lines of sensing elements].

*Claims 10 and 14 have been canceled. New claims 19 and 20 have been added as follows:*

--19. A sensor according to claim 8 wherein when at least one sensing element is exposed to a temperature greater than  $T_s$ , the resistance of the sensor is at least  $1.3R_T$ --

--20. A sensor according to claim 13 wherein the groups comprise lines of sensing elements.--